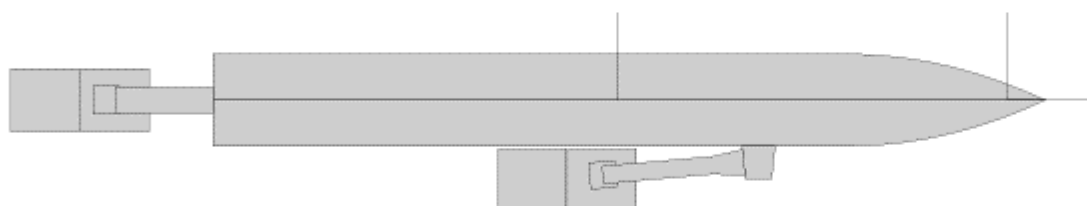


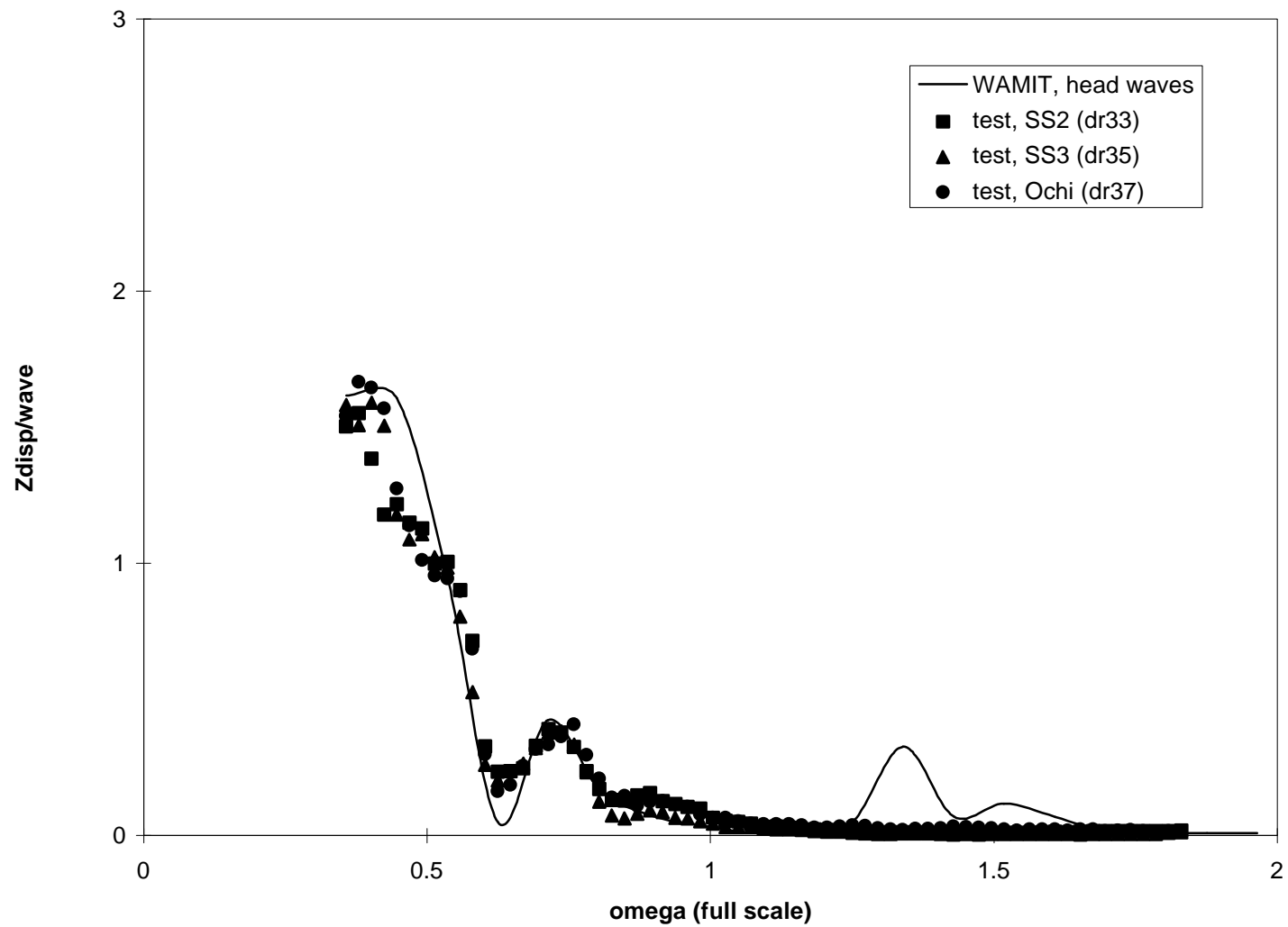
Motions of Multiple Bodies

- Interaction of as many as seven bodies (in the present case)
- Hydrodynamic Loads, Including Interactions
- Mechanical Interactions (Ramps, Connectors, Moorings)

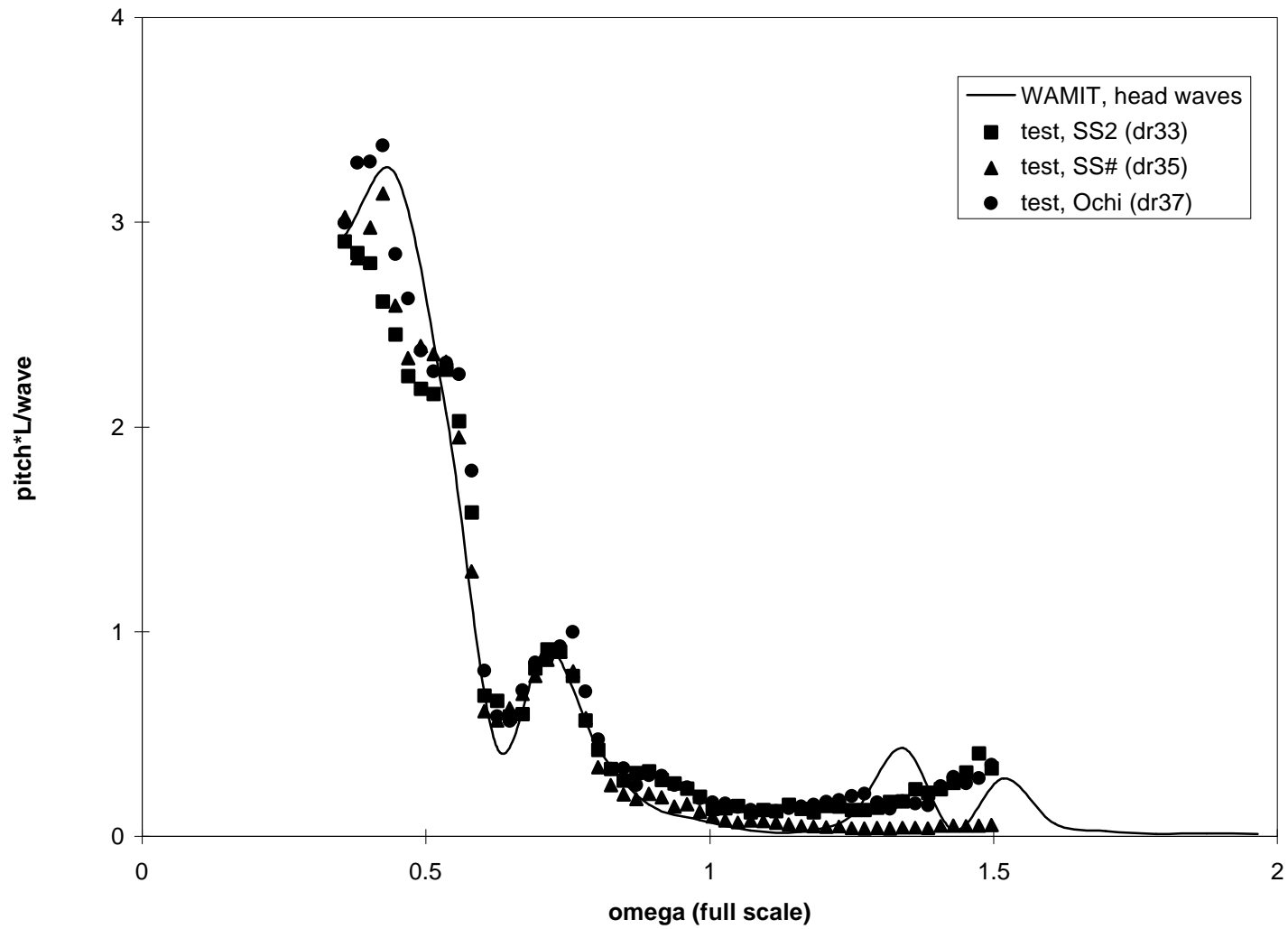


TAKR-296 & Army RRDF's

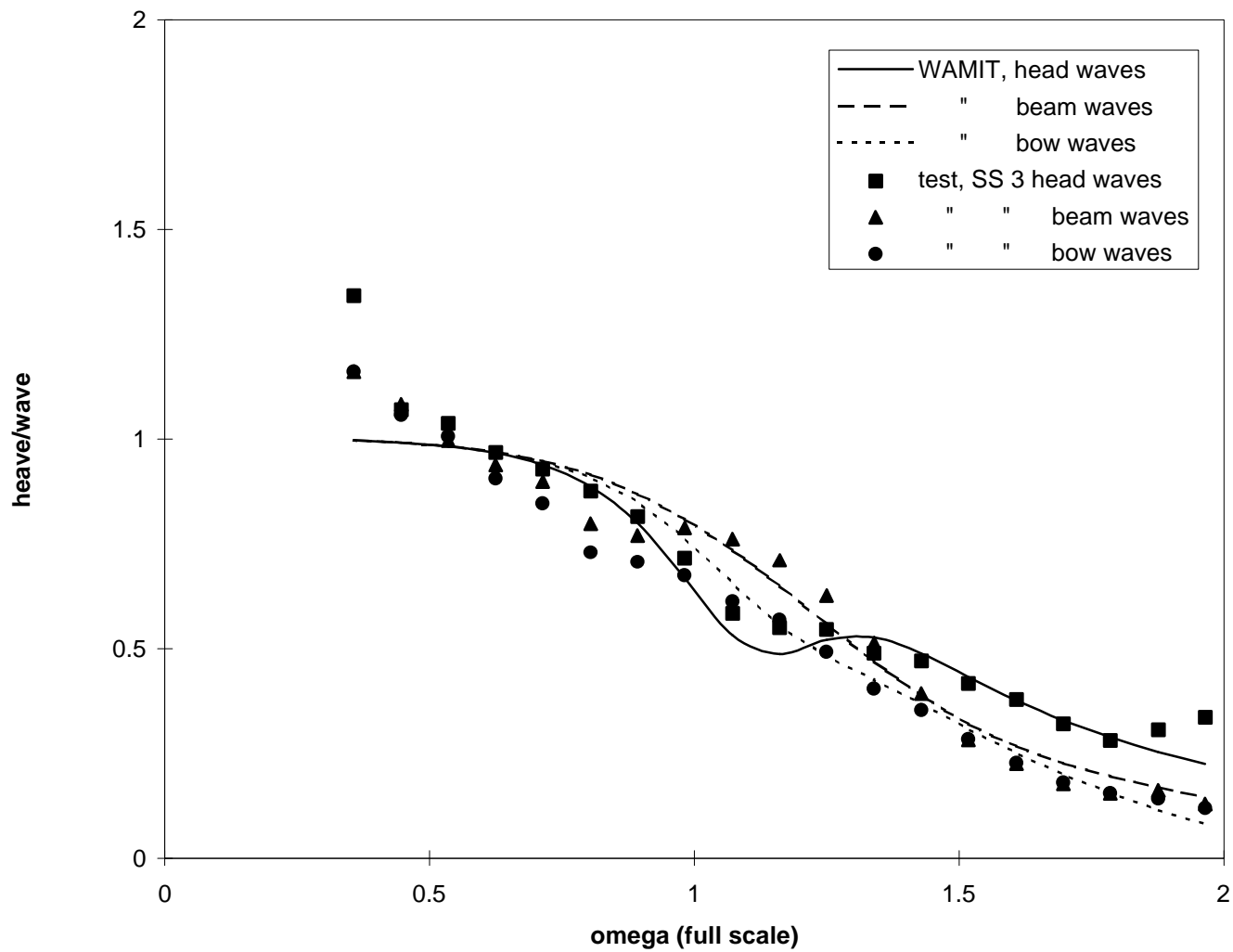
Heave #3 transfer function, TAKR, Head waves



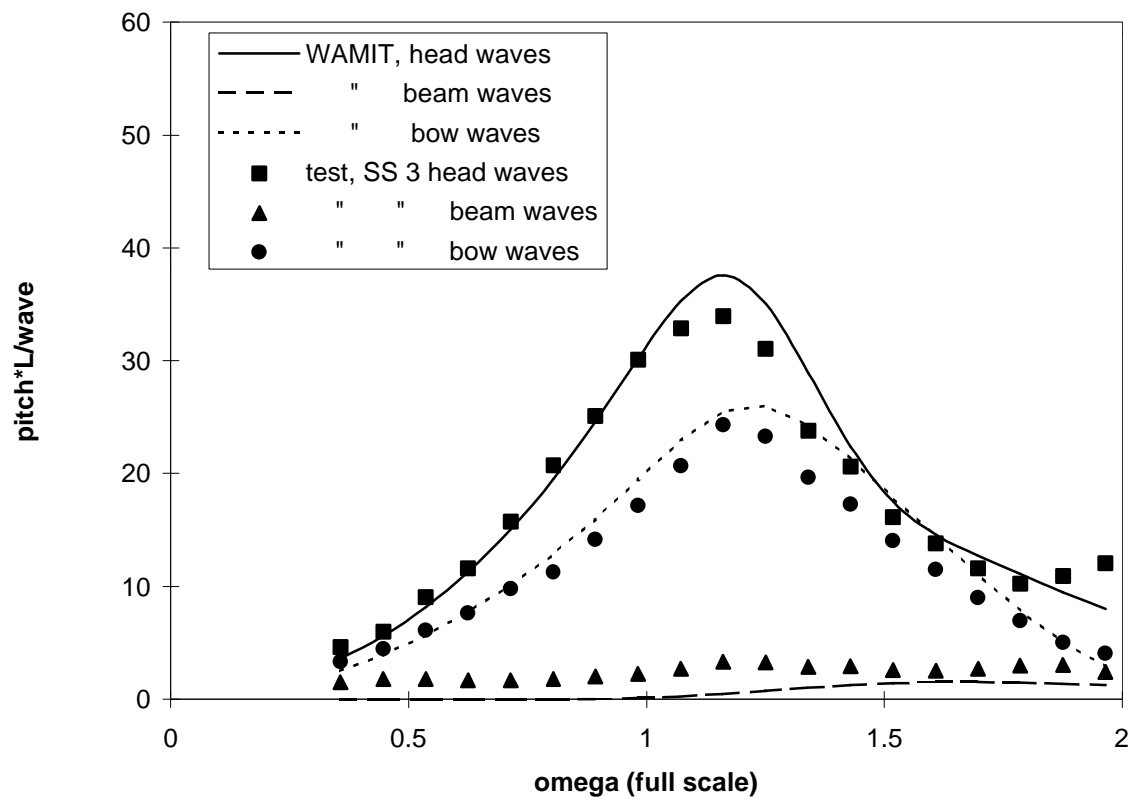
Pitch transfer function, TAKR, Head Waves



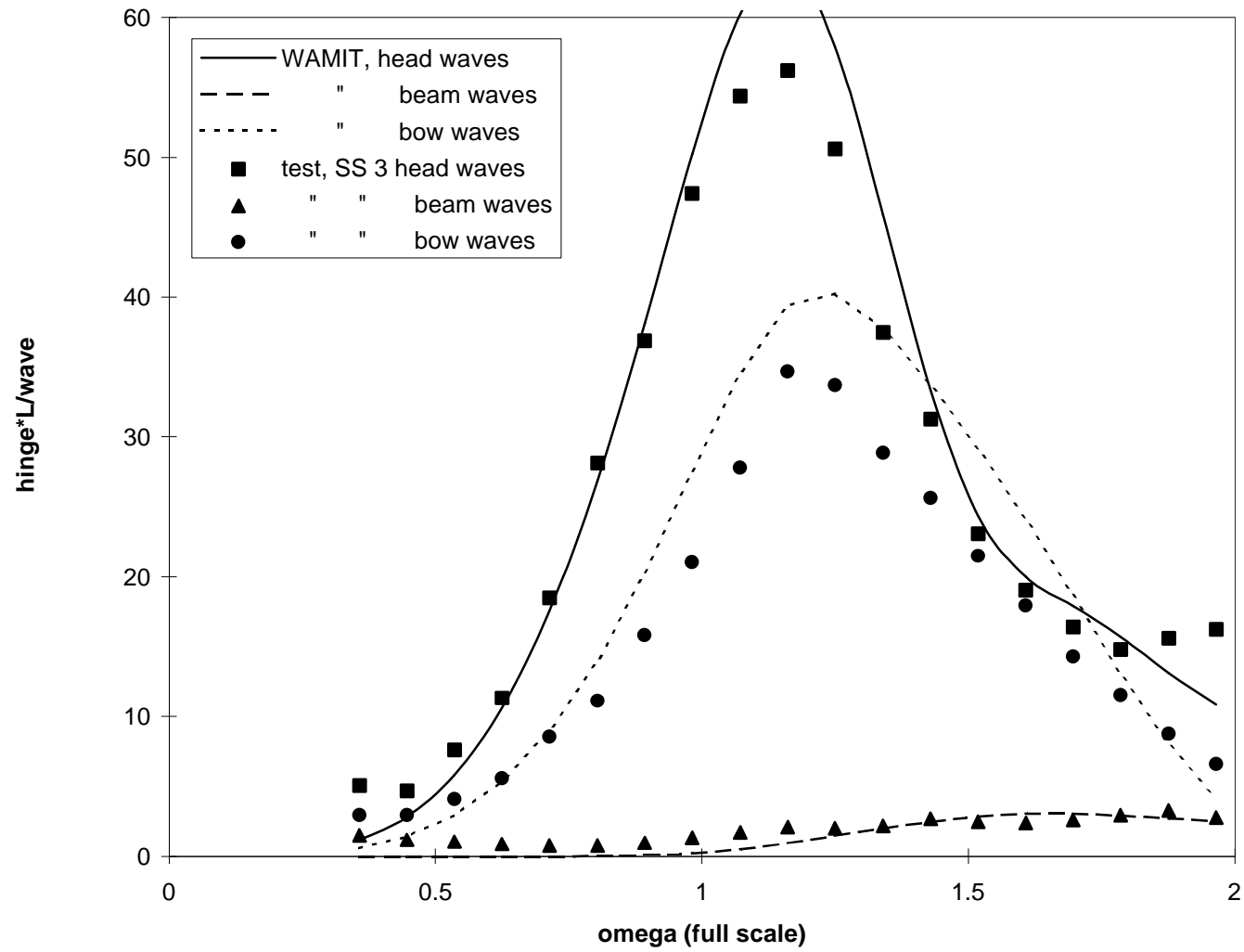
Heave Transfer Function, RRDF Alone



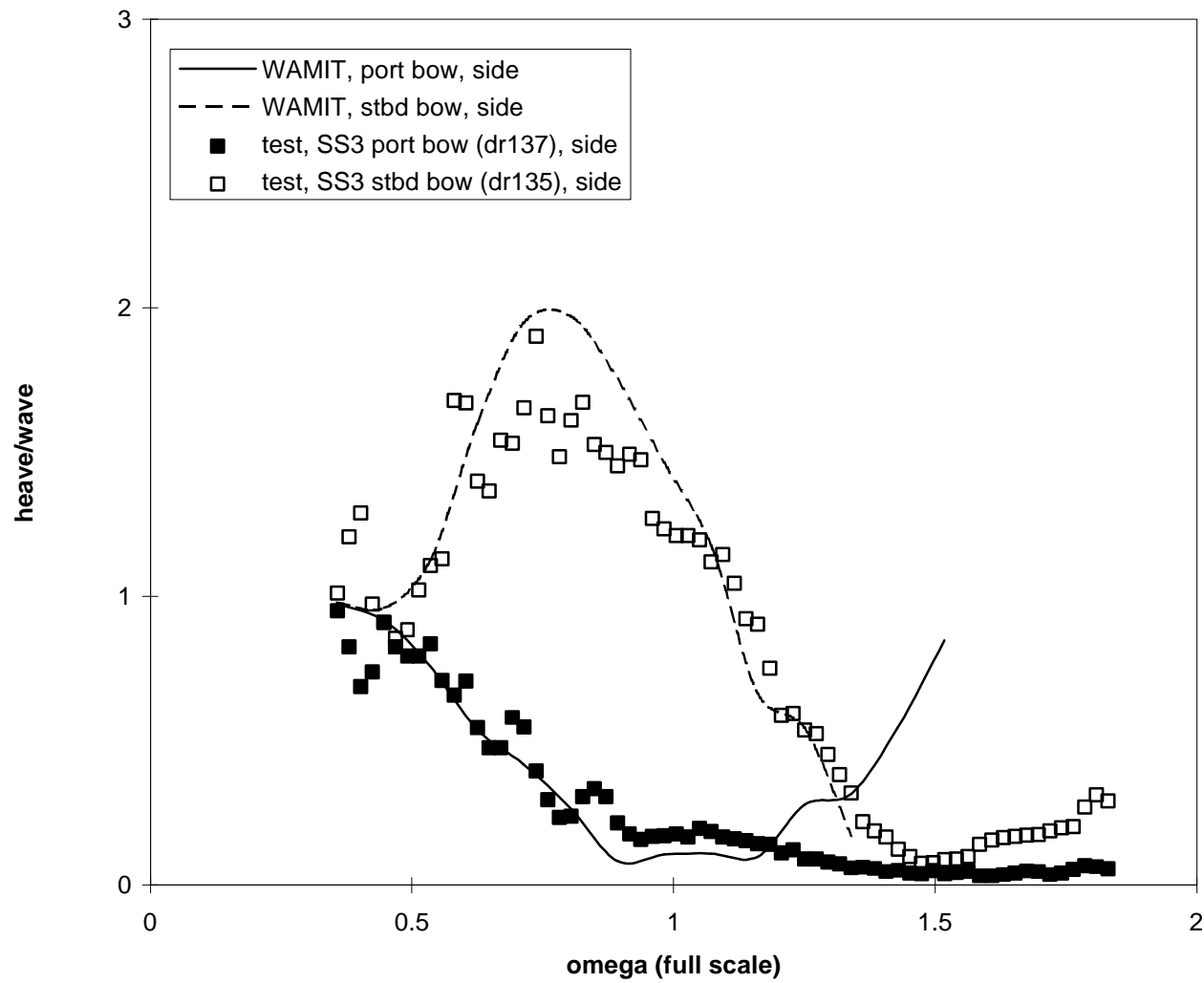
Pitch Transfer Function, RRDF Alone



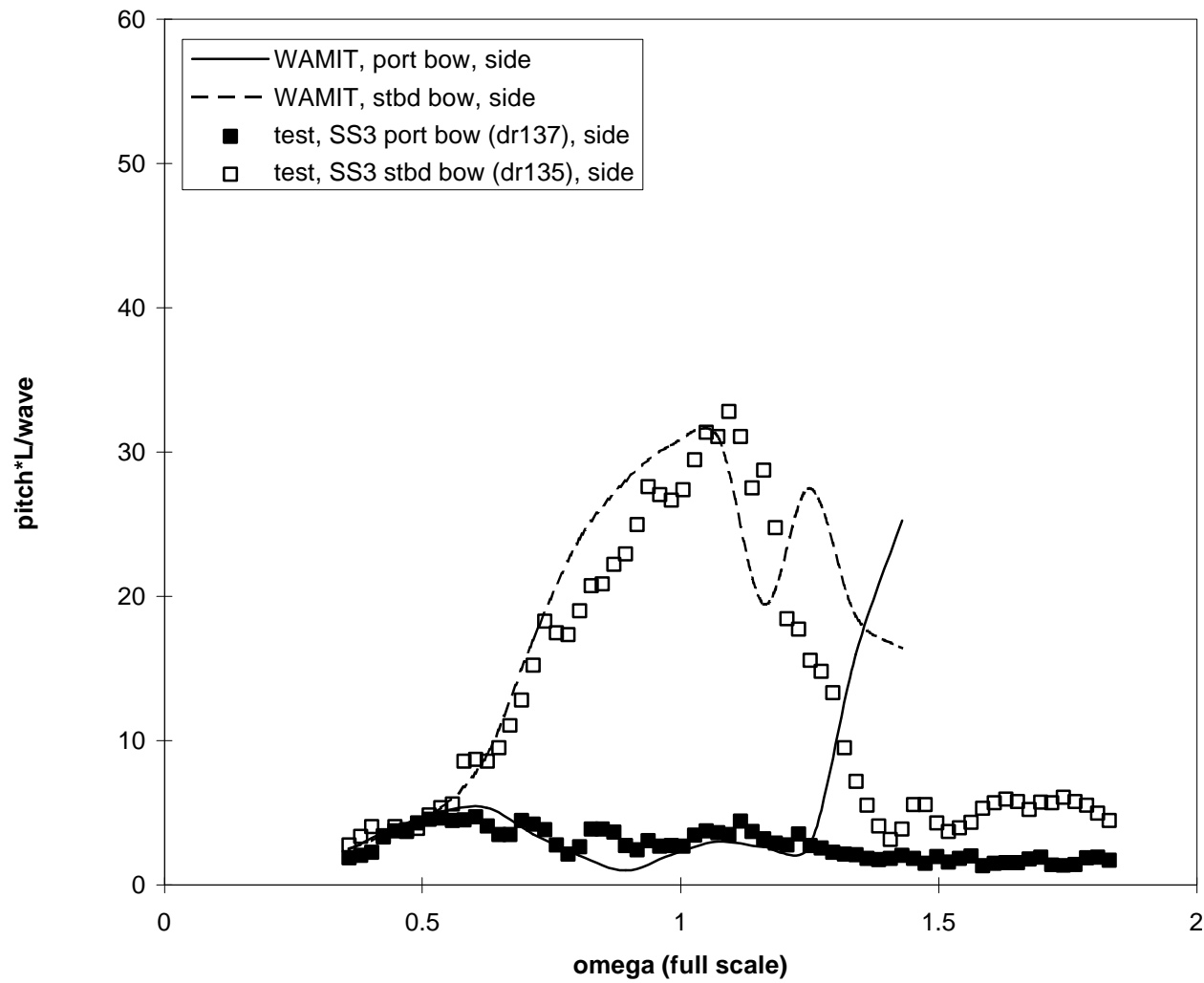
Hinge transfer function, RRDF alone



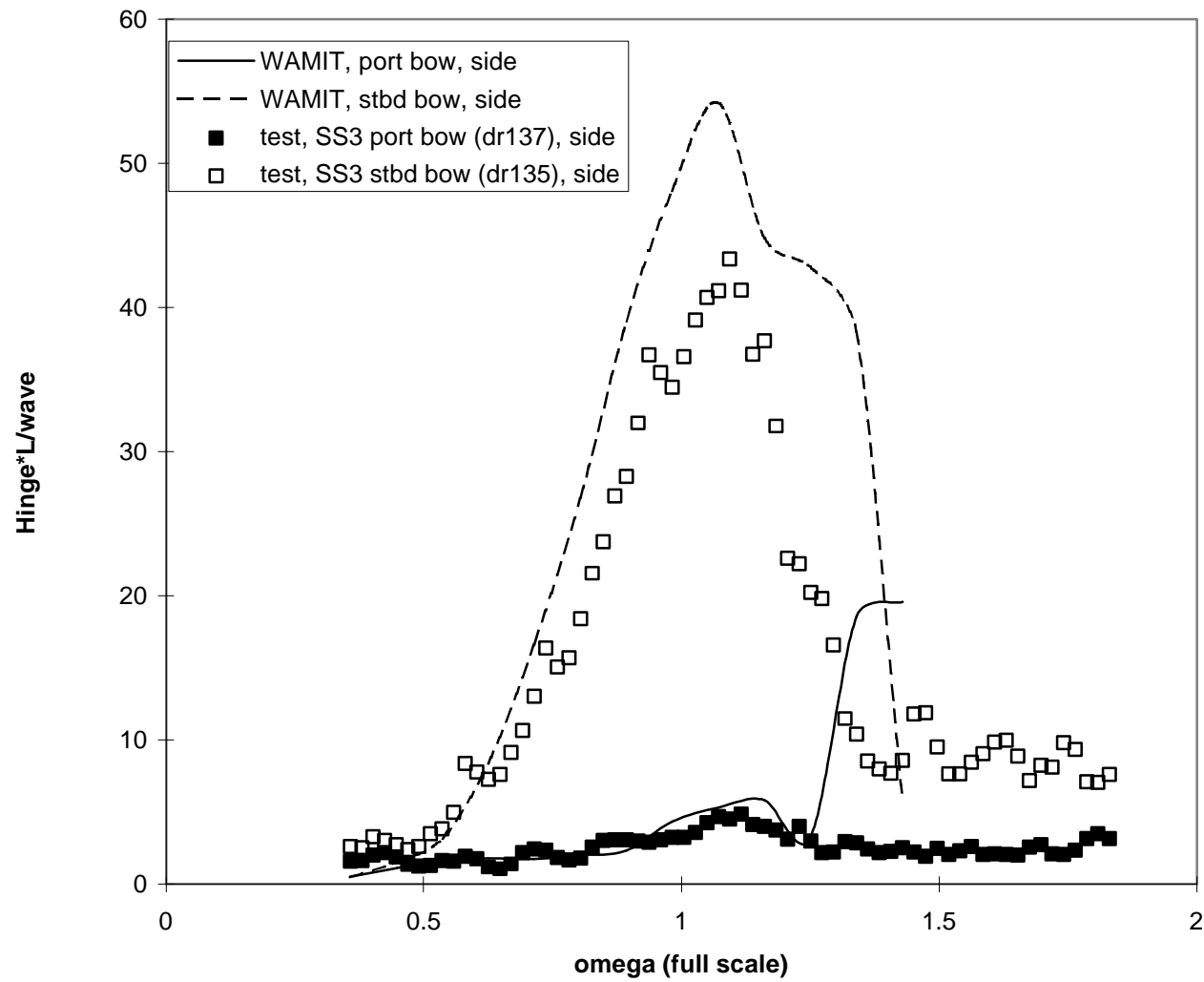
Heave transfer function, side RRDF, Bow waves



Pitch transfer function, side RRDF, Bow waves



Hinge transfer function, side RRDF, Bow Waves



Observations/Conclusions

- Motion of large ship (such as TAKR-296) is virtually unaffected by presence of lighters such as RRDF
- Influence of TAKR on motions of RRDF's is strongly affected by position (side vs. stern) and relative wave heading
- Convergence of calculations for wave periods < 4 seconds needs further study